PRODUCT INFORMATION



N⁶-benzoyl-Cyclic AMP (sodium salt)

Item No. 18819

| CAS Registry No.: | 1135306-29-4 | | | |
|-------------------|---------------------------------------|---------------------------|--------|-------------------|
| Formal Name: | N-benzoyl-adenosine cyclic 3',5'- | 0 | Н | |
| | (hydrogen phosphate), monosodium salt | | -N, N, | |
| Synonym: | 6-Bnz-cAMP | | | |
| MF: | $C_{17}H_{15}N_5O_7P \bullet Na$ | | // \\N | |
| FW: | 455.3 | $\langle \rangle \rangle$ | N() | T T |
| Purity: | ≥98% | | \N′ | |
| UV/Vis.: | λ _{max} : 282 nm | | | |
| Supplied as: | A crystalline solid | | | |
| Storage: | -20°C | | | • Na ⁺ |
| Stability: | ≥4 years | | | |
| | | | | |

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

N⁶-benzoyl-Cyclic AMP (6-Bnz-cAMP) (sodium salt) is supplied as a crystalline solid. Aqueous solutions of 6-Bnz-cAMP (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 6-Bnz-cAMP (sodium salt) in PBS (pH 7.2) is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

6-Bnz-cAMP is a cell permeable cAMP analog that selectively activates PKA over exchange proteins activated by cAMP (Epac1 and 2, also known as RAPGEF3 and 4).¹ It binds the AI and AII subunits of PKA with pK, values of 4.0 and 3.8, respectively, whereas it binds Epac1 with a pK, value of 1.3.² 6-Bnz-cAMP stimulates the phosphorylation of the PKA substrate CREB but does not activate the Epac target Rap1.² It can act synergistically with Epac-selective activators, such as 8-pCPT-2'-O-Me-cAMP (Item No. 17143).2,3

References

- 1. Schwede, F., Maronde, F., Genieser, H., et al. Cyclic nucleotide analogs as biochemical tools and prospective drugs. Pharmacol. Ther. 87(2), 199-226 (2000).
- 2. Christensen, A.E., Selheim, F., de Rooij, J., et al. cAMP analog mapping of Epac1 and cAMP kinase. Discriminating analogs demonstrate that Epac and cAMP kinase act synergistically to promote PC-12 cell neurite extension. J. Biol. Chem. 278(37), 35394-35402 (2003).
- 3. Hewer, R.C., Sala-Newby, G.B., Wu, Y.-J., et al. PKA and Epac synergistically inhibit smooth muscle cell proliferation. J. Mol. Cell Cardiol. 50(1), 87-98 (2011).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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